

# **WAY TO GO, SEATTLE!** PROGRAM EVALUATION

Innovative neighborhood-based trip reduction projects to create a more efficient transportation system.



## **SUMMARY REPORT**

This study evaluates the Way To Go, Seattle! neighborhood trip reduction program. The projects, developed by the City with partner organizations and community groups, represent an innovative approach to community-based, non-commute trip reduction.

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### **Introduction**

For most of the last century, transportation planning was primarily concerned with developing facilities to meet growing vehicle traffic demand. The emphasis was on facility design and construction. Now that the roadway network is mature and expanding capacity is increasingly expensive, transportation planning is progressively more concerned with finding ways to use existing facilities more efficiently. This concept is called trip reduction (also known as "transportation demand management"). An important component of trip reduction is marketing.

By marketing, we don't simply mean commercial advertising intended to sell a particular product. Marketing is concerned with determining consumer needs and preferences, creating appropriate products, testing new products and approaches, providing useful information about products, and advertising the highlights of products to consumers. Community-based marketing is the use of marketing techniques to help achieve community objectives.

The **Way to Go, Seattle!** program is an example of community-based marketing. Its goal is to encourage Seattle area residents to use efficient alternatives to meet their transportation needs—such as walking, cycling, ridesharing, and transit—rather than driving, when possible. This helps achieve a variety of community objectives, including reduced traffic and parking congestion, facility cost savings, improved road safety, reduced pollution emissions, and increased community livability.

### **PURPOSE OF EVALUATION**

This study evaluates the **Way To Go, Seattle!** neighborhood trip reduction programs. These programs involve various approaches to encourage people to meet their transportation needs with less driving. This study assesses project benefits and cost effectiveness, and provides recommendations for prioritizing and improving the programs.

The average American household spends about 20 percent of its annual income on motor vehicles and residential parking, making transportation the second largest household expenditure after housing.

## BENEFITS OF REDUCED AUTOMOBILE TRAFFIC

Automobile traffic imposes a number of problems that are particularly troublesome in growing urban areas. Or, put another way, cities can enjoy significant benefits if residents and visitors reduce their driving and rely more on alternate forms of transportation.

How do we know that reduced urban driving can provide significant benefits? There are many indications. Automobile use causes traffic congestion, road and parking facility costs, crash risk, pollution, and sprawl—problems that tend to decline with reduced automobile traffic. Many of these are “external costs,” meaning that individual consumers do not directly bear the full costs they impose. This is a market distortion that encourages excessive driving; that is, more automobile travel than is economically efficient.

Automobile travel also imposes significant costs on consumers, particularly those with lower incomes. The average American household spends about 20 percent of its annual income on motor vehicles and residential parking, making transportation the second largest household expenditure after housing. This percentage is even higher for lower-income households. As a result, strategies that support and improve affordable transportation alternatives can provide consumer and equity benefits.

The Puget Sound Regional Council (PSRC) and City of Seattle are working to coordinate land use and transportation actions to reduce the number and length of trips people make by automobile. These initiatives are embodied in planning efforts to concentrate growth in the city center, other urban centers, and urban villages, which facilitates the use of public transportation, reduces trip lengths, and makes walking and bicycling more convenient. The City’s transportation strategy is intended to provide a multimodal transportation system in which each component—be it automobile, transit, bicycle—can be used appropriately. Many of the city’s historic neighborhoods are designed as urban villages and the City, in implementing its comprehensive plan, is pursuing initiatives designed to integrate transit, carpooling, pedestrian, and bicycle mobility, and encourage substantially different travel choices that are convenient and affordable, which reduce the use of the single-occupant automobile. These strategies help improve the range of transportation choices available to users and reduce automobile use and, therefore, help address the City’s transportation problems.

## WAY TO GO, SEATTLE! INITIATIVE BACKGROUND

**Way to Go, Seattle!** is an initiative designed to fulfill the goals of the City’s 20-year Comprehensive Plan and neighborhood plans, as well as regional transportation planning objectives. It demonstrates that people who live, work, and shop in Seattle can save money, improve their own health, and make their communities more livable by making more conscious transportation choices, just as they do now with recycling and water conservation. There are a number of projects under the **Way to Go, Seattle!** umbrella, each of which represents an innovative approach to community-based, non-commute trip reduction. The individual projects were developed by the City with partner organizations and community groups.

These projects involve one or more of three general elements:

- **Incentives**— Reduced fare or fully subsidized (free) transit passes, rewards in the form of goods and services, or cash payments
- **Information**—Bicycle, walking, and transit maps, promotional events and activities, bicycle instruction, general information on the impacts of transportation on the environment, and a documentary video
- **Special transportation services**— Vanpool and shuttle transit services to and from events

## EVALUATION METHODOLOGY

The methodology used is a benefit/cost analysis (i.e., it identifies benefits and costs and compares their magnitude), but is not limited to impacts that are easily monetized (i.e., measured in monetary units). Some important impacts, such as health and equity, do not lend themselves to quantification. Each impact is described and quantified as much as possible.

Some evaluation criteria, such as stakeholder and public responses, are not benefits or costs, but are factors to consider when evaluating programs and identifying ways to improve them.

Because these are pilot projects intended to test new approaches to changing travel behavior, impacts and benefits can occur at four different levels:

- 1. Direct impacts during the period of the project.** For example, with the One-Less-Car project, this includes the traffic reduction that occurred while participants were enrolled in the project.
- 2. Ongoing reductions by program participants who reduced their future vehicle ownership and use.** For example, the One-Less-Car project helped all participating households become accustomed to using transportation alternatives and resulted in some households giving up their second car permanently. The Roosevelt High School Way to Go project allowed participating students to use transit for any local trip, not just for commuting to school, and helped students become familiar with public transit service. This is likely to result in additional vehicle travel reductions. In some cases, these ongoing travel reductions are likely to be significantly greater than reductions that occurred during the project.
- 3. Indirect impacts by non-participants inspired to reduce their vehicle ownership and use due to program information and publicity.** The **Way To Go, Seattle!** programs have received considerable positive media coverage. Community based marketing principles suggest that programs such as **Way To Go, Seattle!** can help change community attitudes and habits. In some cases, these indirect travel reductions are likely to be significantly greater than reductions by program participants.
- 4. Lessons learned that help improve the effectiveness of future trip reduction projects.** For example, with the One-Less-Car project, this includes useful knowledge gained concerning whether such a program can be effective, how it can be managed, how consumers respond, and optimal financial incentives.

## DATA COLLECTION

Data describing projects and illustrating results were collected from a number of sources. The primary sources of data were existing documents defining projects and providing evaluation of their effectiveness. These included:

- Project applications
- Project evaluation reports
- Press clippings (print and Internet)
- Project products

Project effectiveness in terms of trip reduction was self-evaluated by project owners, who documented their individual methodology for determining reductions. Additional data were collected through individual interviews with project managers and participants.

## EVALUATION CRITERIA

### Quantitative (Benefit-Cost)

Program Costs

Participant Financial Benefits  
and Costs

Transportation Impacts

Vehicle and Pedestrian  
Congestion

Roadway Costs

Parking Costs

Safety, Security and Health

Energy and Emissions

### Qualitative

Participant Mobility Impacts

Community Objectives

Economic Development

Equity Impacts

Stakeholder Response

Public response

Lessons Learned

## EVALUATION CRITERIA

The evaluation criteria used in this analysis framework are described below. The criteria are sufficiently comprehensive to reflect the broad range of potential project impacts. Each individual criterion reflects either direct or indirect impact.

### PROJECT COSTS

#### Some General Words About Costs

Costs used to perform the analysis were based on best project information available at the time of evaluation. An effort was made to include all project costs associated with City and partner agency staff time, participant incentives, contractors, community partner in-kind services, employer costs, and participant costs. Estimated costs associated with the project impacts (vehicle congestion; roadway costs; parking costs; safety, security, and health; and energy and emissions) are based on national research and reputed industry sources. All costs are current to the period during which the evaluation was performed. The estimates represented are accurate with sufficient precision appropriate for the type of comparative evaluation employed in this study.

A detailed description of cost-estimating methodology used in this study can be found in *Transportation Cost and Benefit Analysis: Techniques, Estimates and Implications* at <http://www.vtpi.org/tca/tca504.pdf>.

This includes direct project expenses and any other direct impacts on government budgets, such as additional costs borne by other government agencies. These are divided into:

1. Administrative costs (e.g., project staff and other overhead expenses)
2. Grants and financial incentives (e.g., funds distributed under the program)
3. Costs to other agencies (e.g., matching funds by other agencies).

It may sometimes be difficult to determine which costs to include and how they should be valued. The guiding principle is to try to identify *incremental resource costs* that provide *incremental services*. Economic transfers are tracked as both costs and benefits. For example, One-Less-Car financial incentives show up as project costs and financial benefits to participants.

Administrative costs tend to be relatively high for small projects, so the portion of administrative costs for these pilot projects do not necessarily reflect what they would be for ongoing and expanded projects.

### PARTICIPANT FINANCIAL BENEFITS AND COSTS

This includes any financial rewards or cost savings (including reduced vehicle costs) and additional transport expenses, such as transit fares or bicycle expenditures, that would otherwise not be made.

In some cases, participants who already use alternative modes receive a financial reward. For example, some people who already commute by transit received free or discounted transit passes under some projects. These are an economic transfer, the full benefit of which is captured by the participants. For these trips, each \$10 in incentives provides a \$10 consumer surplus gain.

In other cases, financial rewards cause consumers to change their travel behavior. For example, some people who would otherwise commute by car shifted to riding transit because they received free or discounted passes. The net benefit is calculated based on the "Rule of Half" (see next page). For these trips, each \$10 in incentives provides a \$5 consumer surplus gain.

## EXPLANATION OF THE “RULE OF HALF”

Economic theory suggests that when consumers change their vehicle mileage in response to a financial incentive, the net consumer surplus is half of their price change (called the “rule of half”). This takes into account the perceived benefits of the financial gain and the perceived costs from reduced vehicle travel that may involve additional expenses, time, and inconvenience due to shifts to alternative modes. Let’s say that the price of driving (that is, the perceived variable costs) increased by 10¢ per mile, either because of an additional fee (e.g., paid parking) or a financial reward, and as a result you reduced your annual vehicle use by 1,000 miles. You

would not give up highly valuable vehicle travel, but there are probably some miles that you would reduce, either by shifting to other modes, choosing closer destinations, or because the trip itself does not seem particularly important. These vehicle-miles foregone have an incremental value to you, the consumer, between 1¢ and 9¢. If you consider the additional mile worth less than 1¢ (i.e., it has no value), you will not take it. If it’s worth is between 1¢ and 9¢ per mile, a 10¢ per mile incentive will convince you to give it up – you’d rather have the money. If the additional mile is worth more than 9¢ per mile, a 10¢ per mile incentive is inadequate to convince

you to give it up – you’ll keep driving. Of the 1,000 miles foregone, we can assume that the average net benefit to consumers (called the *consumer surplus*) is the mid-point of the range, that is, 5¢ per vehicle mile. Thus, we can calculate that miles foregone by a 10¢ per mile financial incentive have an average value of 5¢. A \$100 increase in vehicle costs that reduces automobile travel by 1,000 miles imposes a *net cost* to consumers of \$50, while a \$100 financial reward that convinces motorists to drive 1,000 miles less provides a *net benefit* to consumers of \$50.

## TRANSPORTATION IMPACTS

This includes changes in travel patterns, such as reductions in automobile trips and mileage, and shifts to alternative modes, including direct changes by participants and any indirect or ongoing changes that the program inspires. These travel impacts are a critical factor in this evaluation, since many of the specific benefits (e.g., congestion reductions, facility cost savings, safety, and emission reductions) result from reduced vehicle-miles. In general, the more a program reduces automobile travel, the greater its benefits.

Information is available on the estimated direct travel impacts of most of the individual projects. Additional ongoing and indirect travel reductions are estimated based on the nature of each program and the amount of positive publicity received. These ongoing and indirect travel impacts can be much larger than the direct impacts. For example, the One-Less-Car program is estimated to have reduced 15,700 vehicle-miles of travel directly, 340,000 vehicle-miles through ongoing impacts on participants’ vehicle ownership, and more than 340,000 vehicle-miles by inspiring non-participants to reduce their driving, as described later in this report.

Most **Way To Go, Seattle!** programs cannot be considered cost effective based only on their direct impacts, but can be when reasonable estimates of ongoing and indirect travel reductions are also included. When these additional travel reductions are considered, many of the programs have very attractive benefit/cost ratios.

There are special factors to consider when evaluating these mileage reduction estimates. First, urban traffic congestion tends to maintain a self-limiting equilibrium: if some Seattle households reduce their peak-period driving, other households may take advantage of the marginal reduction in congestion to take additional peak-period vehicle trips. Similarly, freeing up an on-street parking space in a dense urban neighborhood may allow another household to purchase an additional car. Although it is unlikely that this latent demand totally offsets vehicle ownership and travel reductions, it may reduce the net benefits. Thus, a reduction of 300,000 vehicle miles by households that participate in the program might only provide a 200,000 net reduction in vehicle-miles because 100,000 additional vehicle-miles will be induced by other households.

Another factor to consider is whether the number of households that can easily reduce their vehicle ownership and use in response to such programs is ultimately quite small, so that all potential would be quickly realized. If that were true, although the programs may appear cost effective when implemented on a small scale, they would not be cost effective if expanded. For example, it may be relatively easy to identify 50 households interested in reducing their vehicle ownership with minimal new incentive needed to participate in a trial program; but it may be difficult to find 500 or 5,000 households that have equal enthusiasm. The program would become less cost effective as it expands.



We can assume that reductions in driving based on positive incentives, such as financial savings and exercise, make participants better off overall despite the additional travel time, otherwise they would not make the change.

Reductions in surface street vehicle traffic provide additional benefits to society by improving the mobility of pedestrians and cyclists, and therefore everyone's travel options.

There is no particular reason to believe that this is occurring. Seattle residents appear to be responsive to the **Way To Go, Seattle!** message, and there are probably some economies of scale and scope to exploit. For example, with experience and development, many programs may have lower overhead costs in the future. However, program administrators should be on the lookout for indications that the target audience has been saturated.

On the other hand, many alternative modes experience economies of scale that increase long-term travel impacts. As more households reduce their driving and rely more on alternative modes, the increased demand could lead to improved facilities and services that encourage further automobile travel reductions. For example, as more Seattle-area residents ride public transit, the increased demand could result in more frequent bus service, longer service hours, and more HOV facilities. Similarly, if more people bicycle to work there is more support and economic justification for bicycle facility improvements, bicycle parking facilities, and even showers and changing rooms at work sites. This positive feedback cycle can increase the benefits of programs that encourage mode shifts, provided that such economies of scale exist and there is latent demand for shifts to alternative modes, both of which appear to be true in this situation.

## PARTICIPANT MOBILITY IMPACTS

Mobility impacts consider benefits and drawbacks for users from changes in travel patterns including improved transportation options (such as improved walking and cycling conditions, or a new ridesharing service), reduced need for drivers to chauffeur non-drivers, any health and enjoyment benefits from active transportation, increased time spent in travel, and increased chauffeuring by family or friends when a household gives up a second car.

All of the projects being evaluated in this study rely entirely on positive incentives (either in the form of a financial incentive, improved information for use in decision-making, or substitute transportation services), so they provide overall benefits to participants (in addition to indirect benefits from reduced traffic congestion, facility costs, crash risk, pollution emissions, etc.). As a result, we can assume that reductions in driving make participants better off overall, otherwise they would not make the change. These benefits do not depend on any particular changes in mobility or travel speed. For example, somebody who takes 30 minutes to walk rather than 10 minutes to drive to a store as a result of positive incentives (financial rewards, improved walking facilities, a walking map, etc.), must be better off overall despite the additional travel time required, because they enjoy the exercise, value the financial savings, or benefit from some combination of these.

For projects that involve clear price changes (such as fare reductions or financial incentives), the value of these mobility impacts can be quantified based on consumer surplus theory. For example, if a fare reduction or some sort of financial reward leads to an increase in transit ridership, we can assume that consumers who increase their transit use are better off overall (otherwise they would not make the change), and estimate the net benefits to consumers using the "Rule of Half" methodology described above. Conversely, if a fare increase causes a shift from transit to driving, we can assume that those who make the change are worse off overall, and estimate the net cost to consumers using the same method.

# VEHICLE CONGESTION

Congestion reduction benefits derive from reduced urban-peak vehicle travel. This cost reflects the delay that each additional vehicle imposes on other vehicle users, the avoided costs of increasing roadway capacity, or the drawbacks to other consumers who forego urban-peak trips because they are discouraged by congestion. Various studies indicate that urban traffic imposes marginal congestion costs averaging about 5¢ to 15¢ per automobile-mile overall (Federal Highway Administration [FHWA], 1997), and 15¢ to 25¢ per automobile-mile under urban-peak conditions (Mohring and Anderson, 1994). Although most congestion cost studies focus on highway conditions, local streets tend to experience equal or even greater congestion delays per additional vehicle-mile of travel and so are assumed to have comparable costs.

Seattle is one of the most congested cities in North America. The Puget Sound region ranked fourth in per-capita congestion delay in the *2002 Urban Mobility Study* (TTI, 2002). According to that study, congestion costs averaged \$660 annually per capita, about 7.5¢ per vehicle-mile, or 22.5¢ per vehicle-mile if this cost is applied to the one-third of urban travel that occurs during peak periods. This suggests that a relatively high value should be used for evaluating the congestion reduction benefits of vehicle travel reductions by Seattle residents. The values used in this analysis are shown in the table titled Congestion Costs Per Mile.

CONGESTION COSTS PER MILE	Auto	Bus
Off-Peak Vehicle Travel	5¢	10¢
Average Mix of Peak and Off-Peak	15¢	30¢
Urban-Peak	25¢	50¢

For example, the One-Less-Car program reduces an average mix of personal travel and so the congestion-reduction benefits are assumed to average 7.5¢ per vehicle-mile foregone. The Vanpooling-To-Senior-Softball-Games project and other projects dealing with recreational trips primarily reduce off-peak travel and so congestion-reduction benefits are assumed to average 3¢ per vehicle-mile foregone. The Wallingford Employee and Patron Trip Reduction Program reduces peak-period commute trips, and so congestion-reduction benefits are assumed to average 20¢ per vehicle-mile reduced. The Roosevelt High School program reduces urban-peak bus travel, freeing up space on the road which provides 40¢ per vehicle-mile in congestion-reduction benefits.

# NON-MOTORIZED TRAVEL DELAYS

Most congestion cost studies only consider delays motor vehicles impose on other motor vehicles. In urban areas, there is also significant delay and discomfort imposed on non-motorized travel. This is called the *barrier effect*, or *severance*. This represents a direct cost to pedestrians and cyclists, and imposes costs on the rest of society if it causes people to drive for trips that they would otherwise perform by walking or cycling. Put another way, reductions in surface street vehicle traffic provide additional benefits to society by improving the mobility of pedestrians and cyclists, and therefore everyone’s travel options.

A few studies have developed estimates of this impact (Litman, 2002), suggesting that it represents a cost of 1¢ to 2¢ per vehicle-mile overall, and 3¢ to 6¢ per vehicle-mile driven on surface streets under urban-peak conditions. As with vehicle traffic congestion, pedestrian and cyclist delay costs are probably relatively high per vehicle-mile in the Seattle region. A value of 3¢ per automobile-mile and 6¢ per bus-mile are used for this analysis.

# ROADWAY COSTS

Roadway cost savings result from reduced automobile traffic. This is partly incorporated in the congestion impacts described above since reduced congestion reduces demand for roadway capacity expansion projects, but there are also benefits from reduced road maintenance and traffic services (law enforcement, emergency services, street lighting for motor vehicles, etc.). Travel shifts to transit tend to provide little or no roadway maintenance cost savings, due to buses’ heavier weight, but other travel shifts tend to reduce roadway costs.

Fuel taxes dedicated to roadway improvements can be considered to partly offset this cost since changes in driving result in changes in fuel tax revenue. This may be true of state highway costs, but city street maintenance and traffic services are primarily funded through local taxes. The *1997 Federal Highway Cost Allocation Study* (FHWA, 1997) concluded that local automobile travel imposes costs averaging about 1¢ per mile, and that this is an external cost (not funded through road user fees). This cost is assumed to be higher for roadway travel in the city of Seattle, due to higher land use densities and difficult terrain.

Shifts from driving to transit and ridesharing tend to reduce total traffic risk per passenger-mile.

Walking and cycling tends to reduce total travel distance and the risk to other road users.

Increased walking and cycling can significantly improve public health by increasing exercise and fitness.

Expenditures on traffic services were estimated to average \$98 per capita in the Puget Sound region, or about 0.8¢ per vehicle-mile in 1995 (PSRC, 1996). Other studies find even higher costs for such services (Litman, 2002). Total roadway facility and traffic service cost savings are estimated to average 2¢ per automobile-mile and 6¢ per bus-mile reduced.

## PARKING COSTS

Parking cost savings result when households reduce their vehicle ownership and use. These costs tend to be quite high in urban and suburban areas (there are typically two to four parking spaces per urban automobile, each with an annualized value of \$500 to \$1,500, or about \$2,500 per vehicle-year, based on national statistics). These savings accrue to businesses (from reduced employee, customer, and resident parking demand), governments (from reduced on-street parking demand), other motorists (from reduced parking congestion), and participants (when they pay for parking).

It sometimes takes time to capture the full value of reduced parking demand. For example, there may be no immediate savings if an employee who is assigned a parking space uses an alternative commute mode a few days a week. Similarly, if zoning codes require abundant parking, parking spaces may simply sit empty over the short term when automobile ownership and use decline. However, in areas with parking congestion problems, reduced vehicle trips can avoid the need to build new parking facilities and provide other long-term benefits. Parking costs, and parking cost savings, are likely to be particularly high in Seattle because it is a dense, growing urban area with geographic constraints.

For this analysis, reductions in vehicle use are estimated to provide parking cost savings averaging 10¢ per vehicle-mile reduced. Reductions in vehicle ownership are predicted to provide an additional \$600 annually in parking cost savings by reducing residential parking requirements. We assumed that a residential parking space costs \$600 per year (a lower-bound estimate for residential parking costs in urban areas), and non-residential parking costs average 10¢ per mile for the trips that were foregone. A comprehensive review of studies indicates that average off-street parking costs around \$750 per year or \$3 per day per space, and that in urban areas there are typically two or three off-street parking spaces per automobile, including parking at home, worksites, and commercial destinations. We conservatively estimate that these parking costs average 10¢ per mile in the Seattle area—the actual value could be much higher considering the high value of land in this region.

## SAFETY, SECURITY, AND HEALTH

Changes in safety, security, and health may result from these programs and the travel changes they produce. There are several factors to consider:

- Shifts from driving to transit and ridesharing tend to reduce total traffic risk per passenger-mile.
- Walking and cycling have relatively high risk to users per mile of travel, but this tends to be offset by reduced risk to other road users and reduced total travel. For example, a walk to a local store often substitutes for a much longer automobile trip to a more distant shop.
- Reduced automobile use usually reduces total person-miles of travel (that is, people tend to travel far more per day when they drive an automobile than when they rely on other modes), so total crashes tend to decline with reduced driving.



- Some individuals feel greater personal security threats when walking and riding transit than when driving, although driving is not necessarily safer overall since motorists face additional risks such as “road rage.” As use of these modes increases, they tend to become safer for everyone because there are more users who can report problems.
- Increased walking and cycling can significantly improve public health by increasing exercise and fitness.

Motor vehicle crash costs are estimated to range from about 5¢ to 15¢ per vehicle-mile, of which about half is external (imposed on other road users). These externalities tend to be higher in urban areas due to greater risks imposed on pedestrians and cyclists. This analysis uses a net external crash cost value of 5¢ per vehicle-mile, representing the reduction in crash externalities resulting from reduced automobile mileage.

Health impacts are even more difficult to quantify, but likely to be significant (“*Health and Fitness*” VTPI, 2002). Even modest increases in physical activity tend to reduce mortality rates. About 10 times as many people die from cardiovascular-related illnesses as from vehicle collisions, so if shifts from driving to non-motorized travel provide even modest reductions in such diseases, their health benefits are comparable to large reductions in crashes.

The magnitude of this benefit depends, in part, on what sort of travel shifts occur. Shifts from driving to active modes (walking and cycling) provide aerobic health benefits, and most transit trips involve some walking. Rideshare trips can also increase walking. For example, people who carpool to work are more likely to run errands by walking during breaks than automobile commuters.

This analysis assigns a 5¢-per-mile of reduced driving to those trips that shift to an alternative mode that involves active transportation, including transit trips that involve a cycling or walking link.

## ENERGY AND EMISSIONS

Motor vehicle traffic causes air, noise, and water pollution. The costs of these impacts tend to be particularly high in large cities such as Seattle. Motor vehicles also consume petroleum, which imposes environmental and economic external costs. Several studies have attempted to monetize these impacts (Delucchi, 2000; Litman, 2002). In this analysis we use the values listed in the table titled Pollution Costs per Mile.

POLLUTION COSTS PER MILE	Auto	Diesel Bus
Air Pollution	5¢	10¢
Noise Pollution	2¢	10¢
Water Pollution	1¢	1¢
Petroleum Externalities	2¢	4¢
<b>Total</b>	<b>10¢</b>	<b>25¢</b>

These various cost values are from the Air Pollution Costs chapter of *Transportation Cost and Benefit Analysis: Techniques, Estimates and Implications* which is now posted at our website at <http://www.vtpi.org/tca>. These represent middle-range estimates of air pollution costs per urban vehicle-mile.

## COMMUNITY OBJECTIVES

This refers to whether this program helps support strategic transportation and land use objectives established by the City, region, or State. For the most part, all of the projects selected for the Way to Go, Seattle! program satisfy this as a minimum requirement. The following excerpts from State, regional, City, and neighborhood policy documents are examples of goals and objectives, automobile travel demand reduction, and alternate modes.

### State

The *Washington Transportation Plan* identifies the need for tools to help achieve goals expressed in the plan by:

*...Reducing travel demand by shifting people from single-occupant vehicles into other modes such as transit and ridesharing...*

### Region

The Puget Sound Regional Council’s *Destination 2030* document identifies multi-county transportation policies that support a goal to optimize and manage the use of transportation facilities and services. These include:

*...Offering a variety of options to single-occupant vehicle travel...*

*...Facilitating convenient connections and transfers between travel modes...*

*...Promoting transportation and land use improvements that support localized trip-making between and within communities...*

## City

In the City of Seattle's *Comprehensive Plan*, its vision states:

*...Seattle must become a city where more people walk, ride bicycles, and take convenient transit in their neighborhoods instead of driving cars for every trip they make...*

Seattle's *Transportation Strategic Plan*, adopted in 1998, outlines strategies and actions required to achieve the City's transportation goals. In particular the plan identifies:

*...Reducing the use of the car...*

*...Promoting energy-efficient transportation modes...*

*...Creating desirable, safe, and convenient environments that are conducive to walking and bicycling...*

*...Discouraging commuting by single-occupant vehicles...*

The Plan also identifies specific actions which are being implemented by **Way to Go, Seattle!** such as:

*...Support innovative bicycle projects...*

*...Improve bus service information...*

*...Extend trip reduction programs to small businesses and small business organizations...*

## Neighborhood

A number of neighborhood plans refer to improved mobility and access to alternative modes.

### UNIVERSITY DISTRICT NEIGHBORHOOD

*...Provide improved mobility and access by public transportation to services, jobs, businesses, residences, educational opportunities, and other destinations both within and outside of the UCUC...*

### BALLARD/CROWN HILL NEIGHBORHOOD

*...A transportation system that supports residential, commercial and civic activity in the core of the Ballard and Crown Hill urban villages, and encourages people to use transit and nonmotorized transportation modes...*

*...Emphasize accessibility by transit, bicycle, and pedestrians in the downtown Ballard...*

## SUSTAINABILITY

The City of Seattle is committed to sustainable development (see, for example, the City's office for sustainability and environment on the Web at [www.seattle.gov/environment/](http://www.seattle.gov/environment/)). Per capita motor vehicle travel and the quality of transportation options available to non-drivers are primary indicators of sustainability.

## ECONOMIC DEVELOPMENT

Economic development refers to progress toward economic goals, usually measured in terms of employment, income, business activity, and wealth generation. Transportation demand management can contribute to regional economic development in the following ways:

- Increased regional economic activity if consumers shift expenditures from fuel and vehicles to more locally produced goods (fuel expenditures have particularly low regional employment and business activity multipliers).
- Increased economic productivity if vehicle travel reductions reduce congestion delays and overhead costs to businesses, such as reduced congestion delay for commercial vehicles and parking cost savings.
- Increased economic productivity due to more efficient land use (economies of agglomeration).

## EQUITY IMPACTS

Two general types of equity impacts are considered in this study:

- 1. Horizontal Equity** (also called *fairness*) is concerned with whether people are treated equally. It implies that each person or group should receive an equal share of public resources, unless a subsidy is specifically justified.
- 2. Vertical Equity** considers the allocation of costs between different income classes, assuming that public policies should assist people who are economically, physically, or socially disadvantaged.

Each project is evaluated based on the degree to which it supports or contradicts these equity objectives; special equity issues associated with a particular project are discussed in the report.

## STAKEHOLDER RESPONSE

This refers to responses by program participants, staff, and others directly affected were evaluated, including whether they consider the program effective, beneficial, fair, and worthwhile. This study investigated and reports on the general degree to which stakeholders tend to support each project.

## PUBLIC RESPONSE

Public response was evaluated based on the number and character of responses to the projects by the general public, media, and public officials. This study investigated and reports on the amount and type of public and media response to each project.

## LESSONS LEARNED

The lessons learned criterion is whether a project provided useful knowledge that can be transferred and used by other trip reduction projects. This can include information such as how to plan and manage projects, how to attract and retain participants, the effectiveness of various marketing strategies and incentives, and the travel impacts that will result. This study investigated and reports on the degree to which each project contributed useful, transferable knowledge.

If just 18 households in the region reduced their vehicle ownership in response to the project, these benefits would equal the direct benefits from project participants. Total ongoing and indirect travel impacts are more than 50 times greater than direct impacts.

## Project Descriptions and Information Used for Evaluation

Each of the projects included as a subject of the evaluation are described below. Following the project description is a summary of significant project results according to a number of relevant evaluation criteria though each project was evaluated for all quantitative and qualitative criteria.

### A. WAY TO GO, ONE-LESS-CAR

The One-Less-Car project simulates financial conditions that occur when households give up an extra car. The project offers households a weekly financial stipend and various types of support to stop driving one household car (in most cases, a second car). Participants are encouraged to reduce automobile use and given information to help them make smart transportation choices such as riding transit, walking, carpooling, taking taxis, and consolidating trips. Participating households complete journals to record their trip-making and reflect on the changes in their travel behavior the program created.

The project is coordinated by City staff who have conducted two tests so far (Fall 2000 and Spring 2001). A third is being planned which will be modified based on feedback received in the first two. The program has received widespread media attention and recognition for its innovative approach to trip reduction.

#### PROGRAM COSTS

Program costs to date include \$39,500 in administrative costs and \$25,500 in financial incentives given to participants.

#### USER FINANCIAL BENEFITS AND COSTS

Participants received \$85 per week to participate in the project. They spent an average of \$15 per week on additional transportation expenses (transit and taxi fares), resulting in an average net financial gain of about \$70 per week plus any vehicle cost savings.

#### TRANSPORTATION IMPACTS

The 22 households in the Fall 2000 study drove 8,100 fewer miles during the six-week study period, averaging 61 fewer vehicle-miles per household each week. At the end of the study, three participants sold their extra car, three reported that they intend to sell their cars in the future, and four reported that they plan to avoid replacing their extra cars when they fail. Additionally, one household planned to sell their extra car when they retire in about two years, and another was considering this. This indicates that up to 12 of the 22 households (55%) have reduced or plan to reduce their vehicle ownership as a result of participating in the study.

The 23 households in the Spring 2001 study drove 7,600 fewer miles during the six-week study, averaging 55 fewer vehicle-miles per household each week. Four households that planned to participate in the program dropped out before the study began because they decided to sell their extra car, five sold their extra car after the study concluded, three were considering selling an extra car, three reported that they do not plan to replace their second vehicle when it wears out, one replaced their car with a fuel-efficient hybrid vehicle, and one

TRANSPORATION IMPACT SUMMARY Way To Go, One-Less-Car	2000- 2001	2001- 2002 YTD	Total
Total Participants	22	23	45
Weekly mileage reduction per household	61	55	
Sold cars before project began		4	4
Sold cars after project ended	3	4	7
Plan to sell cars soon	3	3	6
Will not replace extra car in the future	4		4
Plan to sell extra car within two years, upon retirement	1-2		1-2
Bought or plan to buy hybrid car		1-2	1-2
Range of vehicle ownership reductions	3-12	8-11	11-23
Middle value of vehicle ownership reductions	7.5	9.5	16.5
Annual mileage reduction per vehicle reduction	5,000	5,000	

more was thinking of doing the same. This indicates that 18 out of the 27 households (66%) have modified or plan to modify their vehicle ownership as a result of the study.

We use the following assumptions for quantitative analysis of this project. Between 3 and 12 households in the first study and between 9 and 16 households in the second study have or will reduce their vehicle ownership as a result of the project (not including shifts to fuel-efficient hybrid vehicles). Using the middle value (7.5 and 13.5, respectively) and assuming that these vehicle reductions last an average of four years, this totals 84 reduced vehicle-years. Assuming that these extra cars would be driven an average of 5,000 miles per year (a relatively low value, reflecting the fact that second and third cars are typically driven significantly less than a household's primary car), this totals 420,000 reduced vehicle-miles. This can be considered a lower-bound value because it does not include mileage reductions of vehicles retained by households that result from the experience of participating in the project (that is, increased use of walking, cycling, and transit by households that do not reduce their vehicle ownership). It also does not reflect benefits that result from the purchase of a hybrid vehicle, or economies of scale for alternate modes (transit, et al) that may result in additional mileage reductions over the long term.

In addition, the project developed resources promoting reduced car ownership (including a Car Cost Worksheet and other materials posted at the **Way To Go, Seattle!** Web site), and received considerable positive publicity throughout the region and across the country. Several individuals who were not part of the study contacted the project staff to report that they were inspired to reduce their household vehicle ownership. This suggests that the indirect impacts on non-participants could be significant. If just 18 households in the region reduced their vehicle ownership in response to the project, these benefits would equal the direct benefits from project participants. Total ongoing and indirect travel impacts are more than 50 times greater than direct impacts.

## PARTICIPANT MOBILITY IMPACTS

During the six-week term of each round, participants were not allowed to use their extra car, but received financial compensation and information resources concerning other transportation choices. Project participation was completely voluntary, so participants must be better off overall or they would not have chosen to enroll. Several households reduced their automobile ownership and use after the project period, which suggests that any automobile travel foregone had little value.

## VEHICLE CONGESTION

A combination of urban peak and urban off-peak travel was reduced by this project. Congestion reductions were calculated based on an estimated 7.5¢ per reduced vehicle-mile.



## **PARKING COSTS**

Reduced vehicle ownership and use reduces parking costs. Several households reduced their vehicle ownership, which reduces residential parking costs. Reduced parking costs were calculated based on 10¢ per reduced vehicle-mile, and \$600 per reduced vehicle-year of car ownership.

## **SAFETY, SECURITY, AND HEALTH**

Reduced driving reduces automobile crashes, although increased walking and cycling may increase exposure to some risks. Shifts to walking and cycling (including as part of transit trips) tend to improve health. Increased road safety was calculated based on 5¢ per reduced vehicle-mile, and improved health was calculated based on 5¢ per mile shifted to active transportation trips (trips that involve a significant amount of walking or cycling).

## **COMMUNITY OBJECTIVES**

Reduced vehicle ownership and use, and increased use of alternative modes, supports various local and regional transportation and land use objectives. This project is consistent with City's Comprehensive Plan goals, and with goals and objectives explicitly identified in neighborhood plans and regional transportation planning documents.

## **ECONOMIC DEVELOPMENT**

Reduced driving for personal errands may shift some business activities to neighborhood businesses. Congestion, road, and parking cost reductions tend to increase economic productivity. Reduced consumer expenditures on vehicle fuel tend to increase economic activity in the region.

## **EQUITY IMPACTS**

The project was open to any Seattle household that owns an automobile and has no more than one car per driver, although the actual number of participants was limited. Specific outreach was made to disadvantaged populations, and potential consumer cost savings may be transferable to other lower-income households.

## **STAKEHOLDER RESPONSE**

Response to Way to Go One-Less-Car have been overwhelmingly positive. Most of the participants were surprised at how easy it was to give up the second car and continue their normal lives without it. Many participants provided constructive suggestions for improving the project.

## **PUBLIC RESPONSE**

The City received numerous e-mails from the public in thanks for its leadership and for starting the One-Less-Car project. This project received wide media coverage ranging from national television and Internet news, including CNN and ABC, local television news, local newspapers, and community papers. The project received a \$100,000 funding award from the Federal Highway Administration to continue the work and package the concept for others to use. The City of Boston recently indicated that it will utilize the Way to Go One-Less-Car program concept as part of its efforts to meet its transportation and land use goals.

## LESSONS LEARNED

The project provided considerable transferable knowledge and resources.

All of the study participants reported that living with one less car was much easier than they had anticipated. Participant motivation for maintaining travel diaries tended to be greatest earlier, and tended to decline over the study period. Achieving geographic diversity, which was one of the goals of the project, was difficult. Additional outreach is needed to neighborhoods and populations where previous participation has been low. Several of the participants indicated that the diaries needed improvement to be easier to use.

## **B. ROOSEVELT HIGH SCHOOL WAY TO GO**

The Roosevelt High School Way to Go project was initiated to investigate ways to raise awareness about trip reduction amongst high school students. The project included a number of promotional/educational activities, incentive programs, rewards programs, and bus fleet reductions that were each tested for their ability to raise awareness, reduce automobile trips, and reduce parking impacts. The project also included a number of surveys designed to measure the students' attitudes about trip education issues as well as program participation and effectiveness.

The project was coordinated by City staff assisted by a consultant. Successful concepts identified by the Roosevelt High School Way to Go project have been expanded at the school and plans are currently underway to replicate these at other high schools within the district. The program recently received the Puget Sound Regional Council's "VISION 2020" award as an outstanding example of how to achieve the region's transportation and land use goals.

### **PROJECT COSTS**

Project costs included \$91,400 for administration and \$16,620 for transit discounts and other direct incentives. These project costs are reflective of additional planning and preparation required for a pilot program that is intended to be transferable to other schools, and designed to test and evaluate a number of trip reduction measures and their effectiveness with high school students. Based on the national average of \$528 per student per year spent on transportation, the costs are comparable to the savings one might expect from reduced student transportation costs.

### **USER FINANCIAL BENEFITS AND COSTS**

High school students received \$16,620 in free transit passes and other incentives to make smart transportation choices.

### **TRANSPORTATION IMPACTS**

There are three sources of transportation impacts from the Roosevelt High School Trip Reduction project. The first is direct reduction as a result of student-focused promotions. These are reflected in the increased number of pass sales to students, which for the year averaged 45 per month over pre-existing levels. This calculates to an annualized estimate of 12,950 total automobile trips reduced assuming eight one-way trips per week, per student on average (including non-school trips). Assuming a three-mile trip length average, this equates to 38,900 miles reduced per year. The second source was trip reduction by teachers and staff, estimated at 40 automobile trips per week. Assuming an average trip length of five miles, this equates to 7,200 miles per year. The third and most significant source of direct trips reduced relates to the elimination of four school bus routes. Assuming a 20-mile route length and 10 miles of deadhead travel per day, miles reduced totaled 21,600 for the first year of the program and 27,300 mile to date for the second (current) year.

### **PARTICIPANT MOBILITY IMPACTS**

This project improved mobility for non-drivers by providing free transit passes. In addition, the project provided information, incentives, and rewards for non-single occupant vehicle (SOV) transportation. Eliminating school bus service may have increased walking distances to access transit for some students.

<b>TRANSPORATION IMPACT SUMMARY Roosevelt High School Way to Go</b>	<b>2000- 2001</b>	<b>2001- 2002 YTD</b>	<b>Total</b>
Annual school days assumed per year / (year to date)	180	130	
Annual school weeks assumed per year / (year to date)	36	26	
Increased number of elective pass-holders	45	45	
Estimated trips per week eliminated	8	8	
Estimated trip length (student)	3	3	
Total mileage reduction for additional pass-holders	<b>38,900</b>	<b>28,100</b>	<b>67,000</b>
Increase number of non-SOV faculty/staff	5	5	
Estimated trips per week eliminated	8	8	
Estimated trip length (student)	5	5	
Total mileage reduction for additional pass-holders	<b>7,200</b>	<b>5,200</b>	<b>12,400</b>
Total bus routes eliminated	4	7	
Route miles assumed per day per bus	20	20	
Route deadhead miles assumed per bus per day	10	10	
Total miles assumed per day per bus	30	30	
Daily mileage reduction total	120	210	
Total mileage reduction for bus route elimination	<b>21,600</b>	<b>27,300</b>	<b>48,900</b>
Total Mileage Reduction	<b>67,700</b>	<b>60,600</b>	<b>128,300</b>

## VEHICLE CONGESTION

By reducing urban-peak bus and automobile travel, this project provided significant congestion reduction benefits. This was calculated based on 20¢ per reduced automobile-mile and 40¢ per reduced bus-mile.

## NON-MOTORIZED TRAVEL DELAYS

By reducing urban-peak bus and automobile traffic in neighborhoods and around schools, this project provided significant reductions in pedestrian and cyclist delay. This was calculated at 3¢ per automobile-mile and 6¢ per bus-mile reduced.

## ROADWAY COSTS

Since buses are relatively heavy, reduced bus mileage provides extra benefits, estimated at 6¢ per bus-mile reduced, and 2¢ per automobile mile reduced.

## COMMUNITY OBJECTIVES

This project supports citywide and community objectives to increase use of non-motorized modes. The Roosevelt neighborhood plan explicitly identifies the need to address transportation issues related to Roosevelt High School.

## ECONOMIC DEVELOPMENT

This project reduces congestion, parking, roadway costs, and consumer fuel expenditures, reductions which in turn tend to increase regional economic development. A number of retail business partners participated by providing incentives and rewards for participating students. This provided them an opportunity to attract student customers.

## EQUITY IMPACTS

The project was limited to Roosevelt High School students, faculty, and staff. It improved mobility options and provided financial savings to a relatively disadvantaged group.

## STAKEHOLDER RESPONSE

The feedback was very positive, both from direct participants and parents. Many indicated they have changed their attitudes and behavior.

## PUBLIC RESPONSE

Though the project was not actively promoted in the media, two articles were written on the program in the University Herald. It also received positive recognition from the Seattle School District and other City departments. The project recently received a Puget Sound Regional Council "VISION 2020" award, which is a recognition of the project being an outstanding example of how to achieve the region's transportation and land use objectives.

## LESSONS LEARNED

Roosevelt High School Way to Go has provided considerable transferable knowledge and resources. As a demonstration project, Roosevelt High School Way to Go determined that some trip reduction elements were effective in directly reducing trips. Others, while not resulting in direct trip reduction, increased awareness of transportation choices in general, and the **Way to Go, Seattle!** program, specifically. Projects like this require a commitment from school administration as well as staff time to support the project. Another lesson learned on this project was that liability issues exist which limit the impact of increasing carpooling by providing preferential parking.



## C. U-DISTRICT ACCESS PACKAGE

This project intends to address parking and traffic congestion problems in the University District commercial district. A small program started in the summer of 2000, the expanded Access Package was introduced in September 2001.

It consists of customer parking validation (1 or 2 free hours at public off-street parking lots), discounted transit tickets for employees (20 tickets sell for \$15, half their standard price), use of FlexCar service, and guaranteed ride home programs for employees. The program is coordinated by the local Chamber of Commerce, relying on volunteers and Chamber staff. Administration is provided by the City's Neighborhood Service Center. The program is marketed directly to its members and promoted by flyers posted in some businesses.

Businesses support the program but participation has been limited. Program marketing has been modest, in part because it relies on the limited staffing resources of the Chamber of Commerce and also because the economic recession reduced emphasis on the program.

### PROJECT COSTS

Project administration as of March 2001 is estimated to cost about \$20,000, including \$15,000 from the City for staff and materials, \$3,000 for King County staff time, and \$2,000 from the Chamber of Commerce. Only a third of this cost is charged to the trip reduction in the benefit/cost analyses, since much of it relates to promotion of the parking discount program. Parking discounts are not a trip reduction strategy in the Access Package, they are intended to promote business activity. In addition to these costs, King County discounts transit tickets worth \$3,750.

### USER FINANCIAL BENEFITS AND COSTS

The project provides financial benefits to transit commuters. It involves costs to businesses (assuming that they give the transit tickets to employees at no cost), although this may partly substitute for parking subsidies or other employee benefits. Because it is voluntary, we assume that project participants must benefit overall, or they would not choose to be involved.

### TRANSPORTATION IMPACTS

As a result of this project, five employers currently provide discounted transit tickets to about 25 employees, most of whom the project coordinators believe are new transit riders. Assuming that this reflects a 60-percent shift from driving to transit (rather than shifts from cycling or walking to transit), and participating employees average two five-mile trips per day, 200 days per year, this results in 30,000 fewer urban vehicle-miles annually. This project may result in some ongoing travel shifts by helping employees become accustomed to using transit. This analysis assumes that an ongoing reduction equal to half of the direct travel reduction occurs. This project may also motivate some employees to reduce their automobile ownership. For example, a household may reduce its ownership from three to two cars if one worker shifts from automobile to transit commuting for an extended time period. A reduction of one car-year is assumed in this analysis (that is, out of the 25 participants, one has reduced its household vehicle ownership due to the project).

Customer parking discounts tend to encourage more automobile trips, and attract customers from other commercial areas. To the degree that this causes local residents to shop in the U-District rather than drive to suburban malls, it can reduce total automobile travel.

This project could probably expand, which would cause a significantly larger vehicle travel reduction. A survey of Chamber of Commerce member employees found that of 60 respondents: 30 drive alone, 16 bus, 14 walk, 4 bike, 2 car/vanpool, and there was 1 "other" (some listed more than one option). Of the 30 SOV commuters, 8 receive free parking and none have employer-provided transit benefits. When these automobile commuters were asked their ability to shift modes in response to suitable incentives, 15 (50%) stated that they would ride transit buses, 5 (20%) would bike, 10 (40%) would rideshare, and 7 (28%) would be unwilling to change.

When asked about incentives that would encourage them to change commute modes, the most attractive options were a financial benefit for taking transit (23), an immediate ride home in case of emergencies (8), an employer-provided car or FlexCar (8), and priority parking for car/vanpools. This suggests that the Access Program could have a moderate to large impact on employee automobile trips if it was widely implemented.

## **PARTICIPANT MOBILITY IMPACTS**

This project improved mobility options by providing benefits for using alternative commute modes, and also through guaranteed ride home and FlexCar services. It also provided better information on customer parking discounts. Participation is optional, so any change in benefits and travel behavior can be considered to directly benefit participants.

## **VEHICLE CONGESTION**

The U-District is considered to have serious traffic congestion problems, so any reduction in peak-period vehicle traffic provides significant congestion reduction benefits. This is calculated at 20¢ per reduced vehicle-mile.

## **NON-MOTORIZED TRAVEL DELAYS**

The U-District has heavy pedestrian travel, so any reduction in vehicle traffic provides significant benefits from improved pedestrian mobility. This is calculated at 3¢ per reduced vehicle-mile.

## **ROADWAY COSTS**

Any reduction in vehicle travel can provide roadway cost saving benefits. This is calculated at 2¢ per reduced vehicle-mile.

## **PARKING COSTS**

The U-District is considered to have serious parking congestion problems, so any reduction in vehicle trips provides significant benefits. This is calculated at 10¢ per reduced vehicle-mile, and \$600 per reduced vehicle-year of car ownership.

## **SAFETY, SECURITY, AND HEALTH**

Shifts from automobile to transit tend to reduce total crash risk and increase walking exercise. Crash reduction benefits are calculated at 5¢ per reduced vehicle-mile, and health benefits are calculated at 5¢ per mile for 50 percent of the mileage reductions, assuming that half of the transit trips involved additional walking or cycling.

## **ENERGY AND EMISSIONS**

Shifts from automobile to transit tend to reduce energy consumption and pollution emissions. This is calculated at 10¢ per reduced vehicle-mile.

## **COMMUNITY OBJECTIVES**

This project supports citywide and community objectives to increase use of transit and non-motorized modes, and encourage infill development.

## **ECONOMIC DEVELOPMENT**

This project can support local economic development by reducing parking and traffic congestion, delivery costs, and parking facility costs, and creating a more attractive street environment. It can also reduce consumer expenditures on fuel. This makes the U-District more attractive to customers (which is an economic transfer, since business activity may shift to other areas within the region but will not increase overall), and provides overall productivity gains to the degree that it reduces resource costs.

## **EQUITY IMPACTS**

This project may be considered inequitable to the degree that only some employees are offered transit discounts. On the other hand, it can increase horizontal equity to the degree that it provides benefits to transit commuters comparable to free parking. It tends to increase vertical equity by providing new benefits for lower income employees.

## **STAKEHOLDER RESPONSE**

The Chamber of Commerce is supportive of the project (although resources are limited). Only a few businesses are offering transit benefits, but participants have been positive about the project.

## **PUBLIC RESPONSE**

Response from the general public, local officials, and the media has been positive. Articles in neighborhood (U-District, University of Washington) newspapers have helped change the perception of the U-District as a difficult place to park.

## **LESSONS LEARNED**

This project provided knowledge and resources that can help improve the package in the future and can be transferred to other projects and locations. Project stakeholders concluded that a sustainable project such as this needs adequate administrative support.

## **D. WALLINGFORD TOOLS FOR SMALL BUSINESS**

This project provided employers in the Wallingford neighborhood with a set of tools designed to offer incentives for their employees to reduce their automobile use for commuting. The tools included transit tickets, guaranteed ride home service, flexible work schedules, and promotional resources and events.

The project was initiated by City staff who provided support through start-up. The neighborhood Chamber of Commerce agreed to take on ownership of the project and lead its implementation. The project was well received by the Chamber and another neighborhood group, Weaving Wallingford, which provided assistance to the effort.

### **PROJECT COSTS**

Costs included \$5,571 in administrative expenses, \$3,375 for transit discounts, and \$100 in costs to other agencies.

### **USER FINANCIAL BENEFITS AND COSTS**

The project provided financial benefits to transit commuters. It involved costs to businesses (assuming that they gave the transit tickets to employees at no cost), although this may partly substitute for parking subsidies or other employee benefits. Because it is voluntary, we assume that project participants must have benefited overall, or they would not have chosen to be involved.

### **TRANSPORTATION IMPACTS**

The majority (estimated at 95 percent) of employees who obtained the discounted transit tickets were already transit users. A total of 4,440 discounted transit tickets were sold under this project. Assuming five percent were new transit trips which would otherwise have been by automobile and that these trips averaged five miles in length, 1,250 urban-peak vehicle-miles were reduced.

### **PARTICIPANT MOBILITY IMPACTS**

This project improved mobility options for non-drivers by providing discounted transit passes to Wallingford district employees.

### **VEHICLE CONGESTION**

Because this program affected urban-peak traffic in a particularly congested area, it has the potential of providing significant congestion-reduction benefits, calculated at 20¢ per automobile-mile reduced. The project's impacts have been small so far.

### **COMMUNITY OBJECTIVES**

This project supports citywide and community objectives, as expressed in the neighborhood plan, to reduce car use and shift commuter travel to transit and non-motorized modes in neighborhood commercial centers.

### **ECONOMIC DEVELOPMENT**

This project has the potential of reducing parking needs for employees, which may free up spaces for patrons and increase business potential. Considering the parking congestion problems in the Wallingford neighborhood, any reduction in vehicle trips provides significant benefits.

## EQUITY IMPACTS

This project increases benefits for those with low-paying jobs and tends to increase vertical equity. As this project was focused on Wallingford neighborhood area employees, it did not provide geographical equity.

## PUBLIC RESPONSE

This project received positive endorsement by the Wallingford Chamber Commerce and was covered in the community newspaper and chamber newsletter.

## LESSONS LEARNED

To make this type of project work requires the involvement and commitment of the majority of neighborhood businesses, which are usually small retailers with modest profit margins. A major lesson learned is that to engage all business owners requires adequate coordination to promote the project and provide administrative support. Relying upon volunteers is often inadequate.



## E. CAR SMART EARTH DAY

The Car Smart Earth Day project was intended to raise awareness of trip reduction in coordination with other Earth Day activities. The project involved the distribution of 10,000 post cards and transit tickets which provided information on the benefits of trip reduction as well as a solicitation of trip reduction ideas that included a contest to win lunch with the Mayor. Transit tickets were attached to the postcards. Forty of the postcards were returned with trip reduction ideas for entry into the contest.

This project was coordinated by City staff with assistance from King County Metro. The postcards were distributed through neighborhood businesses and community service centers.

### PROJECT COSTS

Project costs included \$4,000 from the **Way To Go, Seattle!** program, and \$1,000 in expenses to other government agencies, plus an estimated \$3,750 additional costs to King County Metro assuming that a quarter of the free transit tickets substituted for paid tickets (and so reduced revenues) or increased operating costs.

### USER FINANCIAL BENEFITS AND COSTS

Residents received free transit tickets, with a total face value of \$15,000. We assume that half of these tickets are used, providing a net consumer surplus benefit worth \$6,000.

### TRANSPORTATION IMPACTS

Assuming that half of the transit tickets were used for an average three-mile trip, this represents 15,000 in additional transit passenger-miles. Assuming that a third of these trips would otherwise be made by automobile, this resulted in 5,000 vehicle-miles reduced. This may have inspired some ongoing shifts from automobile to transit.

### PARTICIPANT MOBILITY IMPACTS

This project provided a transit mobility option to Seattle residents via free bus passes that were distributed throughout the city.

### VEHICLE CONGESTION

Congestion reduction benefits are based on an average mix of peak and off-peak travel, calculated at 7.5¢ per reduced vehicle-mile.

### NON-MOTORIZED TRAVEL DELAYS

Reductions in non-motorized travel delays are calculated at 3¢ per reduced vehicle-mile.

### ROADWAY COSTS

Roadway cost savings are calculated at 2¢ per reduced vehicle-mile.

### PARKING COSTS

Parking cost savings are calculated at 10¢ per reduced vehicle-mile.

## SAFETY, SECURITY, AND HEALTH

Crash reduction benefits are calculated at 5¢ per reduced vehicle-mile, and health benefits are calculated at 5¢ per mile for 50 percent of the mileage reductions, assuming that half of the transit trips involved additional walking or cycling.

## ECONOMIC DEVELOPMENT

Partnerships with business associations may have increased traffic to businesses by individuals seeking the postcard and Metro pass.

## EQUITY IMPACTS

This project was open to all Seattle residents and delivered across the city through neighborhood business associations and community service centers.

## STAKEHOLDER RESPONSE

Of the 10,000 postcards and free passes distributed, 40 entries for the lunch with the Mayor competition were received along with trip reduction ideas.

## PUBLIC RESPONSE

The project was covered in the *Seattle Times* and received promotional support from partnerships with the Puget Sound Clean Air Agency and the American Lung Association.

## LESSONS LEARNED

This project provided moderate transferable knowledge. The major shortcoming of this project seemed to be a lack of promotion. A better developed promotional strategy as well as more work with neighborhood business associations in delivering the project would be critical to the success of another project of its type. A highly visible, symbolic media event would also help improve the success of a project like Car Smart Earth Day.

## **F. CAR SMART COMMUNITIES CHALLENGE GRANTS**

The Car Smart Communities grant project provided grants to Seattle communities for projects that would promote trip reduction. Grants that let community members implement their own ideas to reduce neighborhood traffic, from bicycling and walking guides, to event-related promotions, to special transportation services. Each grant was worth up to \$5,000 for the grantee to develop and implement their project. A number of resources were provided to potential grantees via a City Web site, including project ideas, links to transportation resource groups, information on the impacts of automobile use, and “how-to” tools to assist grantees in developing projects.

The project was administered by City staff. Each individual grant project was developed and carried out by the grantees with assistance, where necessary, from City staff.

### **PROJECT COSTS**

Project costs include approximately \$80,000 in administrative expenses and \$82,100 in grants.

### **USER FINANCIAL BENEFITS AND COSTS**

Grant recipients received funding for a desired project. Most provided volunteer labor and matching funds.

### **TRANSPORTATION IMPACTS**

According to grant submitters, the funded grant projects are predicted to directly reduce 179,227 vehicle-miles of travel. Some grant projects may provide additional on-going travel reductions.

### **PARTICIPANT MOBILITY IMPACTS**

Many of the grant projects served to improve mobility options for non-drivers and for the transit dependent. Informational products such as special transit and cycling maps helped individuals better understand how to get around within the city without a car.

Some of the grant projects provide direct mobility services to participants via special event shuttle services and others provided incentives to use non-automobile modes to travel.

### **VEHICLE CONGESTION**

Congestion reduction benefits were calculated at 7.5¢ per reduced vehicle-mile, representing an average mix of peak and off-peak travel impacts.

### **SAFETY, SECURITY, AND HEALTH**

These grant projects reduce vehicle traffic, which reduces crash risk. Many increase active transportation—which may increase crash exposure to participants—and tend to improve health. Crash reduction benefits are calculated at 5¢ per reduced vehicle-mile, and health benefits are calculated at 5¢ per mile for trips involving additional walking or cycling.

## COMMUNITY OBJECTIVES

All of the Car Smart Communities grant projects were consistent with community objectives on some level. The City of Seattle's Comprehensive Plan contains a vision that would encompass the efforts of each of the grant projects.

Many of the grant projects were focused on neighborhoods with adopted plans which specifically identify actions that are needed to implement the plan. Many of the grant projects are consistent with these, which generally refer to increased use of transit and non-motorized modes, and/or reduction in automobile travel. The Fremont neighborhood plan expresses a vision that includes a "genuine pedestrian culture".

## ECONOMIC DEVELOPMENT

To the degree that these grant projects reduced traffic congestion, parking and roadway costs, they increase economic productivity. To the degree that grant projects reduce fuel consumption and shift consumer expenditures to goods with greater regional input, they increase regional economic development.

Many of the grant projects promote local business activity. Some involved promotional partnerships with businesses, or direct business advertising as part of the project product or activity.

## EQUITY IMPACTS

Equity impacts varied depending on the type of grant project and the perspective used. Some projects were targeted at a small or closed group of individuals. Others have broad benefits. Some grant projects provide direct benefits to disadvantaged populations.

## STAKEHOLDER RESPONSE

Stakeholder response to Car Smart grant projects were generally "very positive." This is evidenced by direct feedback as well as by the high instance of volunteer activity and donated resources.

## PUBLIC RESPONSE

Indicators of public response to the Car Smart grant projects include duplication of ideas, and partnerships in supporting and delivering projects by business associations, non-profit organizations, and other community groups.

Grant projects were either promoted by or reported on by local and community newspapers, local radio stations, and community newsletters.

## LESSONS LEARNED

Some grant projects provide useful knowledge that can be transferred to other situations.

Most of the projects reported that more promotion and more professional assistance in developing promotion strategies were required. Community project owners lauded the excellent support by City staff in planning and executing the projects and appreciated the City staff's sensibilities in helping when they were needed and not obstructing or interfering with the grantees' ability to do their own work.

The Car Smart grants were very successful in empowering motivated individuals and seemed to be "the right formula reaching the right groups of people." Several grantees suggested that opportunities for collaboration and idea exchange be facilitated by the City on future projects.

These projects can help address a variety of specific problems, including traffic and parking congestion, consumer costs, road and parking facility costs, non-motorized travel delay, crash risk, and pollution emissions.

Most programs help achieve community objectives such as equity, economic development, and more efficient land use, which are difficult to quantify.

## Evaluation Results and Analysis

Two techniques were used to evaluate and compare the value of the **Way To Go, Seattle!** projects. A benefit/cost model was developed, which incorporates the various costs and benefits that are suitable for quantification (the full model is a spreadsheet that is available on request for review). Many of these benefits are based on the travel impacts, that is, vehicle travel reductions which resulted in reduced congestion, road and parking facility costs savings, increased safety and health, and reduced pollution emissions. Direct consumer benefits include financial rewards and vehicle cost savings: financial benefits to current transit users were incorporated into the model at their full value; financial benefits that resulted in a change in travel patterns were incorporated at half their value, based on the “rule of half” described earlier.

The following table section titled “Benefit/Cost Analysis Summary” summarizes the results of this analysis. It indicates that several of the projects provide net benefits (benefit/cost ratio greater than 1.0). This type of analysis only incorporates impacts that can be quantified in monetary units. Other factors which may also be important—such as equity, economic development, and support of strategic community objectives—are not directly incorporated. As a result, some projects may be justified despite a low benefit/cost ratio.

The projects were also evaluated by rating them according to qualitative evaluation criteria. Of course, this approach depends on how the criteria are defined and weighted, and the ratings that are assigned. The qualitative ratings are summarized in the following table section titled “Qualitative Factors Summary.” In this case, each criteria is given equal weight, and there are some opportunities for double-counting, which may affect the results.

## Conclusions

The **Way To Go, Seattle!** program is an innovative effort to encourage more efficient transportation. It has implemented several creative projects to help achieve community and regional transportation and land use objectives.

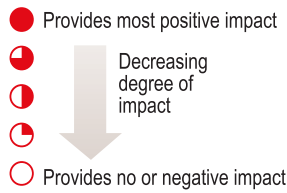
These projects can help address a variety of specific problems, including traffic and parking congestion, consumer costs, road and parking facility costs, non-motorized travel delay, crash risk, and pollution emissions. Large urban regions in general—and the Puget Sound region in particular—have relatively severe transportation problems, so programs that encourage transportation alternatives, such as **Way To Go, Seattle!**, are particularly justified. It therefore makes sense that the City of Seattle should implement innovative trip reduction projects.

These projects cannot be justified based solely on their direct travel impacts (vehicle travel reductions by participants during the program term). Only when ongoing vehicle travel reductions by participants are considered with indirect reductions by non-participants do these programs appear to be worthwhile investments. In addition, most help achieve community objectives such as equity, economic development, and more efficient land use, which are difficult to quantify. Much of the **Way To Go, Seattle!** program’s value consists of the positive exposure it received through the media and the message conveyed directly to community members that it is feasible and rewarding for ordinary Seattle residents to reduce their automobile ownership and use. Positive responses by program participants, local residents, the media, and officials in other communities indicate that this message is effective.

Some people may be skeptical about the value of marketing transportation alternatives. They may argue that such programs provide little benefit, or can only be justified once, after which all potential benefits have been achieved.



## EVALUATION RESULTS SUMMARY



PROJECT	Benefit/Cost Analysis Summary				Qualitative Factors Summary						
	1. Total Miles Reduced	2. Total Costs	3. Totals Benefits	4. Benefit/Cost Ratio	5. Participant Mobility Impacts	6. Community Objectives	7. Economic Development	8. Equity Impacts	9. Stakeholder Response	10. Public Response	11. Lessons Learned
A. Way to Go, One-Less-Car	855,700	\$65,000	\$413,000	6.4	●	●	●	●	●	●	●
B. Roosevelt H.S. Way To Go	128,300	\$108,020	\$113,700	1.1	◐	◐	◐	●	●	●	●
C. U-District Access Package	45,000	\$10,400	\$28,000	2.7	◐	◐	◐	◐	◐	◐	◐
D. Wallingford Tools for Small Business	1,250	\$9,050	\$4,000	0.4	◐	◐	◐	◐	◐	◐	◐
E. Car Smart Earth Day	5,000	\$8,750	\$8,000	0.9	◐	◐	◐	◐	◐	●	◐
F. Car Smart Communities Grants	179,227	\$162,100	\$67,200	0.4							
F1. Fremont Bike/Ped Map	4,320	\$5,000	\$1,800	0.4	◐	◐	◐	◐	x	x	x
F2. CarLess In Wedgewood Brochure/Map	2,592	\$1,600	\$1,100	0.7	◐	◐	◐	◐	◐	◐	◐
F3. View Ridge Bus Brochure/Map	1,944	\$1,700	\$800	0.5	◐	◐	◐	◐	◐	◐	◐
F4. Way to Go, Seattle! Documentary	1,080	\$5,600	\$400	0.1	◐	◐	◐	◐	x	x	x
F5. Softball VanPooling	3,750	\$1,500	\$2,000	1.3	◐	◐	◐	◐	◐	◐	◐
F6. Bike-to-Shop	10,800	\$2,600	\$4,600	1.8	◐	◐	◐	◐	◐	◐	◐
F7. Bike-to-Shop 2	10,800	\$3,150	\$4,600	1.5	◐	◐	◐	◐	x	x	x
F8. Summer Bike Camps	4,100	\$4,700	\$1,400	0.3	◐	◐	◐	◐	◐	◐	◐
F9. Explore 44 Directory	16,329	\$5,000	\$6,800	1.4	◐	◐	◐	◐	x	●	◐
F10. Car-Free Fremont 1	6,480	\$5,000	\$2,700	0.5	◐	◐	◐	◐	◐	◐	◐
F11. Danskin Shuttle 2001	6,500	\$3,000	\$2,200	0.7	◐	◐	◐	◐	◐	◐	◐
F12. Route 74 Promotion	4,320	\$1,000	\$1,800	1.8	◐	◐	◐	◐	◐	◐	◐
F13. Way to Go Zoo 1	14,266	\$5,000	\$5,900	1.2	◐	◐	◐	◐	◐	◐	◐
F14. Way to Go Zoo 2	6,480	\$2,500	\$2,400	1.0	◐	◐	◐	◐	x	x	x
F15. Way to Go Zoo 3	35,640	\$5,000	\$13,200	2.6	◐	◐	◐	◐	x	x	x
F16. Ballard Walking Guide	3,456	\$5,000	\$1,500	0.3	◐	◐	◐	◐	x	x	x
F17. Car-Free Fremont 2	6,480	\$3,500	\$2,400	0.7	◐	◐	◐	◐	x	x	x
F18. Burke Gilman Trail Signs	1,350	\$5,000	\$600	0.1	◐	◐	◐	◐	x	x	x
F19. Danskin Shuttle 2002	7,000	\$3,750	\$2,400	0.6	◐	◐	◐	◐	x	x	x
F20. Columbia City Bike/Ped Map	4,320	\$5,000	\$1,800	0.4	◐	◐	◐	◐	x	x	x
F21. Youth Ventures Bike Club	7,776	\$5,000	\$3,300	0.7	◐	◐	◐	◐	x	x	x
<b>Totals</b>	<b>1,522,000</b>	<b>\$633,000</b>	<b>\$818,000</b>								

x = Insufficient data (project not yet complete)

Businesses generally do not stop advertising after one campaign... They continually implement marketing programs in order to build and retain customers, test new ideas, respond to market changes, and gain knowledge. Similarly, community-based marketing campaigns must continually use fresh messages and methods.

But the importance of marketing should not be understated. Most successful retail businesses, from soft drink producers to clothing retailers, rely on marketing to determine consumer preferences and provide appropriate information about their products. The automobile industry in particular devotes tremendous resources to promoting motor vehicles and driving. Businesses generally do not stop advertising after one campaign, regardless of whether it is considered a success or a failure. They continually implement marketing programs in order to build and retain customers, test new ideas, respond to market changes, and gain knowledge. Similarly, community-based marketing campaigns must continually use fresh messages and methods.

Some people may consider community-based marketing such as this outside the scope of municipal government's role. They may prefer to leave consumer transportation decisions completely to the commercial market. This might be justified if governments had the power to implement efficient prices for roads and parking facility use, and for external costs such as crash risk and pollution. However, such market reforms are politically difficult. Until they can be implemented, community-based marketing programs may be justified.

## CONSIDERATIONS FOR FUTURE PROJECT SELECTION

Below are some general guidelines that we believe can help evaluate and prioritize potential projects.

- Projects tend to be most effective if they convey the message that typical Seattle households can feasibly reduce their vehicle ownership and use, and will be better off as a result, including through realization of financial savings, reduced stress, increased exercise, and more livable communities.
- No single transportation alternative will be appropriate for all users or all trips. Projects that support and encourage use of a variety of transportation options can provide greater benefit and convey a more positive marketing message than programs that only support and encourage use of a single transportation option.
- Projects that improve transportation options and rely on positive incentives tend to directly benefit participants. Such user benefits should be considered in analysis.
- Projects that result in reduced car ownership (rather than just reducing car trips) tend to be particularly beneficial.
- Projects that help young people reduce their automobile use and learn about alternative modes can have significant long-term benefits, although it is difficult to know how great this impact will be, or where it will occur (a program that helps teenagers use transit may result in lifelong reductions in driving for some people, but they may move to another region).
- Shifts from driving to non-motorized travel, and strategies that reduce total physical travel (such as telework) provide the largest benefits (congestion reductions, parking cost savings, improved health, and energy and emission reductions). Shifts from driving to ridesharing and transit provide moderate benefits (congestion reductions, parking cost savings, safety benefits, and some energy and emission reductions). Shifts to smaller or more fuel efficient cars provide modest benefits (mainly energy and emission reductions).
- Projects that help reduce urban-peak trips provide more benefits than programs that reduce off-peak trips.
- These projects are intentionally innovative, and so their value results, in part, in the knowledge they provide and the transferability of results to other individuals, situations, and communities.

## PROJECT EVALUATION AND RECOMMENDATIONS

As mentioned earlier, this study lacks some of the information needed to measure **Way To Go, Seattle!** program benefits with precision. We cannot determine exactly how much they reduced automobile travel, their larger impacts on residents' attitudes about their travel behavior, or the full benefits that result from reduced driving.

However, we do believe that the available information allows us to reach some conclusions about the minimum value and the relative merits of these programs.

### A. WAY TO GO, ONE-LESS-CAR

**6.4**

**B/C**



**RATINGS**

This project appears to be an excellent way to convey the message that typical Seattle households can reduce their automobile ownership and use, and be better off overall as a result. The two projects were well received by participants and the public, and resulted in a surprising number of households giving up an extra car. Unit costs of the project are likely to decline over time with greater experience.

There may be an ultimate limit to the number of households that can respond effectively to this message, and the public may eventually lose interest. This project can be justified as long as there continues to be potential participants and media interest, it can develop and test new vehicle travel reduction methods, and present new perspectives (for example, varying the types of participants and incentives). If, after the project appears to run its course, it may be appropriate to take a break for a few years and then reintroduce it later.

#### Recommendations

Continue project as long as there are enthusiastic participants and positive media coverage. Develop a formal research plan to ensure data collection quality and consistency. Test various different combinations of incentives and demographic groups. Perform follow-up surveys of participants to determine longer term travel changes. Continue to develop resources that all households (not just project participants) can use to evaluate and apply transportation alternatives. Highlight the point that each household can reduce its vehicle travel in its own way, using a variety of transportation options.

### B. ROOSEVELT HIGH SCHOOL WAY TO GO

**1.1**

**B/C**



**RATINGS**

This project appears to do a good job of identifying and responding to high school students' transportation needs and preferences. The project provided direct benefits to participants (improved transportation options), it helped young people develop less automobile-dependent transportation habits which may continue in future years, and it helped establish a precedence for similar programs at other schools.

Although the project had significant costs, it also provided significant savings by reducing the need to operate a special school bus system. In this case, no additional transit service appeared to be needed to accommodate the additional demand. This suggests that the project may have been cost effective in terms of direct financial costs.

This suggests that high schools should consider using public transit rather than special school buses whenever possible, or offer students a choice. This project highlights the importance of public agencies in general, and schools in particular, being aware and responsive to their clients' transportation needs and preferences.

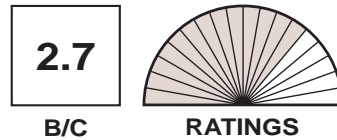
#### Recommendations

Continue and expand project wherever conditions are suitable. Help schools to develop trip reduction programs that encourage students, parents, and staff to use alternative modes. Encourage all public agencies to consider relying on alternative transportation when possible to serve clients.

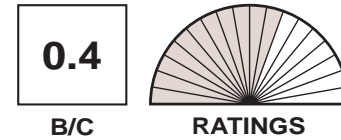
### C. U-DISTRICT ACCESS PACKAGE AND D. WALLINGFORD TOOLS FOR SMALL BUSINESS

These are two examples of trip reduction projects that have the potential of providing significant benefits. Both target commercial districts with significant traffic and parking congestion problems, and where local environmental quality has important commercial value. They also provide direct benefits to participants.

#### *U-District Access*



#### *Wallingford Tools for Small Business*



However, neither project has been very successful at reducing automobile use, nor have they provided a strong marketing message that is likely to reduce automobile travel by non-participants. The projects offer a limited range of incentives (mainly discounted transit fares), only a small number of businesses and individuals have participated, and many of these appear to be people who use transit anyway. To be effective such projects require:

- More administrative and marketing resources.
- Support for a broader range of transportation options and services.
- More focus on shifting current automobile commuters to alternative modes.

One approach that could significantly increase the effectiveness of efforts to provide transportation services and encourage more efficient travel behavior in commercial centers would be to create a Transportation Management Association (TMA) for each one. A TMA is a private, non-profit, member-controlled organization that provides transportation services in a particular area, such as a commercial district, mall, or industrial center. They are generally funded through a combination of government grants and member fees or assessments. TMAs can provide a variety of services:

- Marketing and promotion
- Commute trip reduction
- Parking management and brokerage
- Shared parking coordination
- Pedestrian and bicycle planning
- Freight transport management
- Rideshare matching and vanpool coordination
- Shuttle services
- Guaranteed ride home services
- Flextime support
- Telework support

### **Recommendations**

Improve projects by creating standard trip reduction program guidelines and resources suitable for any commercial center, which promotes use of alternative modes by employees, clients, and residents. Resources should highlight a full range of travel options, including walking, cycling, ridesharing, and transit, plus support services and incentives. Subsidies should be provided in a consistent manner (i.e., good for either vanpooling or bus transit), and should target current automobile users who might shift mode. These projects should be integrated with parking management plans, pedestrian improvements, and commercial area marketing. In some smaller commercial areas, City staff may provide resources and advice, and the program can be implemented by volunteers; but in larger areas, the program requires professional coordination (although this can be part-time) based on a TMA model.

## E. CAR SMART EARTH DAY

**0.9**

**B/C**



**RATINGS**

This program is intended to encourage residents to try transit and submit innovative transportation improvement ideas. It is difficult to determine what effect it had on residents' attitudes or travel behavior, but the relatively modest response suggests that its impacts are small. This may indicate that its message is well known and no longer inspiring, or that the activities are not engaging to a large number of residents.

### Recommendations

Develop new activities and resources with broad public appeal, which convey a positive message about reduced automobile use, and useful information about how it can be done. Do not only emphasize community benefits (such as reduced pollution), include information on how reducing automobile use can provide direct benefits to participants, including healthy exercise, enjoyment, financial savings, and improved community livability.

## F. CAR SMART COMMUNITIES GRANTS

This program included a variety of grants supporting a wide range of activities. It is difficult to provide a detailed conclusion about the value of each grant project, because they have diverse goals and methods, and several have yet to be completed. As a result, it is difficult to come to a conclusion about the overall value of the program.

That being said, the program does help achieve the objectives of improving transportation options (for example, by providing information to users on bicycle and transit services) and encouraging more efficient transportation (for example, by organizing an event). Of course, there are many factors to consider when allocating such grants, including whether different geographic and demographic groups receive a fair share. In addition, the guidelines described above can also be incorporated into the selection and evaluation process. Below are some specific evaluation criteria that can be used.

- Does it convey the message that typical Seattle households can feasibly reduce their vehicle ownership and use, and will be better off as a result?
- Does it support and encourage use of a variety of transportation options, rather than just one mode?
- Does it help reduce car ownership (rather than just car trips)?
- Does it help young people develop more efficient transportation habits that they may continue in future years?
- Does it encourage use of active transportation (walking and cycling)?
- Does it help reduce urban-peak trips?
- Are results transferable to other individuals, situations and communities?

### Recommendations

Continue this project. Incorporate explicit objectives concerning what messages and transportation changes are desired, but continue to be flexible so that diverse and innovative projects can be implemented.

Seattle's status as the leader in community-based trip reduction marketing provides significant benefits in terms of the City's civic esteem and external image. It provides high-visibility evidence that Seattle is solving its traffic congestion problem in diverse and creative ways that are community-based and sustainable.

## SUMMARY AND FUNDING RECOMMENDATIONS

Following are a number of recommendations in addition to the project-specific recommendations provided above. These are offered to improve the overall effectiveness of the **Way to Go, Seattle!** program.

### STANDARDIZED DATA COLLECTION

The analysis framework described in this report can be used to determine what information should be collected on all future projects. It will allow a continuous, consistent evaluation and provide better information for decision-making. A standard form can be created for collecting this information, with a small, easy-to-use participant handbook. Active involvement in the baseline and evaluation data collection efforts will provide project participants more investment in the project and improve the likelihood that the project is successfully executed and accurately evaluated. Below are the types of data that should be collected for each project.

- Project cost (including costs to other public agencies)
- User financial benefits and cost (financial rewards, vehicle cost savings, any additional financial or time costs to users)
- Transportation impact (mode shifting, vehicle travel reductions, when and where travel is reduced — i.e. peak, off-peak, urban, rural)
- Participant mobility impacts (whether it improves consumers' transportation options)
- Equity (including both horizontal and vertical equity impacts)
- Stakeholder responses (including participant surveys when appropriate)
- Public and media responses (including a summary of any media coverage)
- Lessons learned (conclusions and recommendations about the project and how it could be improved).

### PROGRAM FUNDING

Community-based marketing programs like **Way to Go, Seattle!** are most effective when sustained for a period of time in which residents can make adjustments to their ways of travel and how they make transportation choices, all the while being reinforced by the information and opportunities provided by the program. The City is receiving a good return on its investment from the **Way to Go, Seattle!** program, and the program needs to be continued if the benefits are to continue as well. The program to date has also demonstrated that the City's investment can attract partners and other resources such as the FHWA grant and numerous in-kind contributions that extend the program's effectiveness and reach.

Seattle is in the position of being the leader in community-based trip reduction marketing. This status provides significant benefits to the City both in terms of its civic esteem and external image. It provides high-visibility evidence that

Seattle, while being notorious as a leader in traffic congestion, is going about solving its congestion problem in diverse and creative ways...in ways that are community-based and sustainable.

While it is recommended that the City continue to support **Way to Go, Seattle!** as an important part of its approach to managing Seattle's transportation system, the City needs to establish a stable source of funding to maintain the program at its current level. The City must also consider whether the current program, which does not have the resources to meet the potential citywide demand for trip reduction programs, is adequate or whether it should be expanded to provide for geographic expansion throughout the City. Another level of program support would, in addition to providing the resources to administer projects citywide, invest in additional pilot projects like Way to Go, One-Less-Car and Roosevelt High School Way to Go to keep the city of Seattle in its place as leader in this area with growing national interest. These choices are described as funding scenarios in the table below titled **Way to Go, Seattle!**

## Funding Scenarios

The costs presented in the table reflect total costs to the City, not net additional costs. Costs associated include time spent on the program by existing staff positions. Depending on staff resource availability, additional temporary personnel time or consulting services may be required to meet program needs.

The second scenario is recommended at a minimum. Much of the investment made to date can be leveraged to reduce the cost of delivering projects in other parts of the city, but the administrative capacity to expand the projects geographically needs to be provided. The **Way to Go, Seattle!** program shares similarities with the City's other non-roadway/bridge programs and should be supported with similar continued funding as long as it continues to return benefits. The City should keep the program under continuous evaluation for its cost-effectiveness and success at achieving other community goals. While the City should continue to monitor the performance of the **Way to Go, Seattle!** program and its project elements, it should also, understanding the nature of marketing, be looking for the next innovative project that will help continue the program's effectiveness. It is for this reason, the third scenario should be considered. However, considering the success the **Way to Go, Seattle!** program has had to date in attracting grant funding, pilot projects could be pursued contingent upon additional program revenue and not as part of annual program funding.

PROGRAM FUNDING SCENARIOS	Associated Costs
1. Maintain Existing Programs <i>(150,000 direct trips reduced)</i>	\$335,000
2. Expand Programs to Meet Citywide Demand <i>(100,000 direct trips reduced)</i>	\$410,000
3. Continue Leadership - New Innovative Projects <i>(130,000 direct trips reduced)</i>	\$700,000



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